

Medical Research Council Unit

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Dear Cy,

Pontecorvo is holding a small conference on recombination in the middle of March, in Scotland, and I have to open the discussion (there will be no set papers), in the fifth session, on the physical chemistry of recombination! The fourth session is on recombination in phage. I have no idea at the moment what to talk about. A few months ago the following point occurred to Leslie Orgel and myself: it seems more likely that DNA chain will grow in only one direction, defined chemically. Thus replication of one chain of a DNA duplex should start at one end of the duplex, and of the other chain at the other end. Using as an additional postulate the idea that three chains might wind round together, but not four chains, Leslie and I worked out some interesting schemes for DNA replication in phage, but there seemed to be too many of them, so we dropped it temporarily. Some of them gave your partial heterozygotes by a mechanism similar to the one which Jim had told us you had suggested.

If you have anything written down about this sort of thing I would be most grateful for a copy. I'd also be most interested to hear how things are going in general. What is the genetic status of the "big piece", for example? And is there anything new on the h suppressors?

As to our own work, Sydney arrived on New Year's Eve. He has been ordering apparatus and materials and we hope to start experimental work next week. I visited Hoagland on my way back to England and am now bursting with ideas about protein synthesis. We have made no progress with obtaining crystals of pairs of bases, but we have only tried three pairs, as the work is being done as a stand-by job.

Do remember me to Jeana, and also to Charlie and Martha.  
With best wishes,  
Yours ever,